EPA WORK ASSIGNMENT NO: 076-2JZZ
EPA CONTRACT NO: 68-W8-0110
FOSTER WHEELER ENVIRONMENTAL CORPORATION
ARCS II PROGRAM

FINAL
SITE INSPECTION PRIORITIZATION (SIP)
PEERLESS TUBE CORPORATION SITE
BLOOMFIELD
ESSEX COUNTY, NEW JERSEY
CERCLIS NO: NJD002171122

AUGUST 1995

VOLUME II OF II

NOTICE

D1473.LYN

RECOMMENDATIONS

The existing information and newly collected data are sufficient to evaluate the site. The 4-acre site contains an active facility which manufactures aerosol cans and squeeze tubes. Its activities generate wastes which contain mainly paints and chlorinated organics. Two on-site sources of historical contamination were an out-of-service underground solvent storage tank and an area of contaminated soil located on the northern portion of the site.

The overall HRS score for the Peerless Tube site is 7.67.

The groundwater pathway score is 14.80, and is based on an observed release to an on-site monitoring well. Groundwater beneath the site is used on a limited basis within the site vicinity. Although both aquifers found beneath the site are capable of potable water supply, the majority of the population is supplied by ground and surface water sources located outside the 4-mile radius, or at some further considerable distance. There are only 23,553 people being served by drinking water wells within 4 miles of the site. The nearest well is located between 0.25 and 0.50 mile from the site. No contaminant release has been documented to these wells. No wellhead protection area is present within 4 miles of the site.

The surface water pathway score is 0.23, and is based on a potential-to-release basis. The surface water pathway includes Wigwam Brook (adjacent to the site location), the Second River, the Passaic River, and Newark Bay. No release of contamination to any of these waterbodies has been documented. There are no surface water intakes, fisheries, or wetlands located along these waterbodies, except for a small acreage of wetlands adjacent to Newark Bay. Each waterbody (except Wigwam Brook) exhibits a state surface water classification as a sensitive environment. There are no wetlands or sensitive areas on the site property.

The soil pathway score is 0.41, and is based on contamination in surface soil at the site. Analytical results of surface soil samples indicate contamination exists within 2 feet of the surface; however, there is no documentation for migration of contaminants from the sampled locations. There are no nearby day-care facilities or terrestrial sensitive environments, on or within 200 feet of the contaminated soil. The nearest school and residence are also more than 200 feet away from the site property.

The air pathway score is 3.99, after evaluation based on a potential-to-release basis. An observed release of contaminants via the air has not been documented. Although a total of 541,487 residents live within a 4-mile radius of the site, there is a low potential for release of contaminants to air from the small contaminated soil areas due to the low concentrations of volatile organic compounds found.

A sensitivity analysis was performed to determine how different scenarios would affect the site score and assess the probability of an observed release and actual contamination of targets. Only the groundwater and surface water pathways were considered in this exercise.

The following scenarios were evaluated:

1. When an observed release and Level I actual contamination was assigned to 19 wells serving 46 people, the overall site score increased from 7.67 to 28.74.

2. When an observed released and Level II actual contamination was assigned to the 184 wells serving 460 people, the overall site scored 28.5.

3. When an observed release of TCE was assigned to sediment located in the brook in the vicinity of the site, the overall site score increased only to 7.69.

The sensitivity analysis indicates that the surface water pathway is of less concern than the groundwater pathway. The possibility of an observed release to target water wells is minimal, as these are upgradient. There is no confirmed contamination of any drinking water wells which may be related to the site. In addition, there are no drinking water wells within the 0.25-mile radius and less than four wells exist within the 0.5-mile radius. The attribution to the site of an observed release in wells at a further distance will be questionable, as the site is located in an urban zone containing other possible sources of contamination.

Based on the existing information and the sensitivity analysis, a finding of No Further Remedial Action Planned (NFRAP) is recommended for the site.

NPL Characteristics Data Collection Form
PEERLESS TUBE - 06/29/95

Record Information

1. Site Name: PEERLESS TUBE
   (as entered in CERCLIS)
2. Site CERCLIS Number: NJD 002171122
3. Site Reviewer: DANIEL M MAITRE
4. Date: 11/8/1994
5. Site Location: BLOOMFIELD/ESSEX COUNTY/NEW JERSEY
   (City/County,State)
6. Congressional District: 8
7. Site Coordinates: Single

   Latitude: 40 47'09.0" Longitude: 74 12'06.0"

Site Description

1. Setting: Urban
2. Current Owner: Private - Industrial
3. Current Site Status: Active
4. Years of Operation: Active Site , from and to dates: 1920 to present
5. How Initially Identified: Citizen Complaint
6. Entity Responsible for Waste Generation:

   - Manufacturing
   - Other Manufacturing

7. Site Activities/Waste Deposition:

   - Other - Soil contamination
   - Tanks - Below Ground

Waste Description

8. Wastes Deposited or Detected Onsite:

   - Solvents

Response Actions

9. Response/Removal Actions:

   - Other Removal Action Has Occurred

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - Not Applicable

Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 33656.0

14. Residential Population Within 4 Miles: 541486.0

Water Use Information

15. Local Drinking Water Supply Source:

    - Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 50632.0

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

    - Municipal (Services over 25 People)

- Private

18. Surface Water Adjacent to/Draining Site:

- Stream

HRS DOCUMENTATION RECORD
PEERLESS TUBE - 06/29/95

1. Site Name: PEERLESS TUBE
   (as entered in CERCLIS)

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7. Site Coordinates: Single

   Latitude: 40 47'09.0" Longitude: 74 12'06.0"

	Score
Ground Water Migration Pathway Score (Sgw)	14.80
Surface Water Migration Pathway Score (Ssw)	0.23
Soil Exposure Pathway Score (Ss)	0.41
Air Migration Pathway Score (Sa)	3.99
Site Score	7.67

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: BRUNSWICK AQUIFER		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	6
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	460
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Well	50	9.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	3.50E+02
8d. Population (lines 8a+8b+8c)	**	3.50E+02
9. Resources	5	0.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	3.59E+02
12. Targets (including overlaying aquifers)	**	3.70E+02
13. Aquifer Score	100	14.80
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	14.80

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	1
2c. Distance to Surface Water	25	20
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	210
3. Potential to Release by Flood		
3a. Containment (Flood)	10	10
3b. Flood Frequency	50	25
3c. Potential to Release by Flood (lines 3a x 3b)	500	250
4. Potential to Release (lines 2d+3c)	500	460
5. Likelihood of Release	550	460
Waste Characteristics		
6. Toxicity/Persistence	*	4.00E+01
7. Hazardous Waste Quantity	*	10
8. Waste Characteristics	100	3
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.08

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	460
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	2.00E+03
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	1000	10
Targets		
18. Food Chain Individual	50	2.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.00E-04
19d. Population (lines 19a+19b+19c)	**	3.00E-04
20. Targets (lines 18+19d)	**	2.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.11

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	460
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	2.00E+03
24. Hazardous Waste Quantity	*	10
25. Waste Characteristics	1000	10
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	5.51E-01
26d. Sensitive Environments (lines 26a+26b+26c)	**	5.51E-01
27. Targets (line 26d)	**	5.51E-01
28. ENVIRONMENTAL THREAT SCORE	60	0.03
29. WATERSHED SCORE	100	0.23
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	0.23

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer Aquifer: GLACIAL DRIFT AQUIFE		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	6
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	460
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	4.00E+01
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	3
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	5.00E+00
10. Targets (lines 7+8d+9)	**	5.00E+00
11. DRINKING WATER THREAT SCORE	100	0.10

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	550
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	2.00E+03
14. Hazardous Waste Quantity	*	10
15. Waste Characteristics	1000	10
Targets		
16. Food Chain Individual	50	1.00E+00
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	0.00E+00
17c. Pot. Human Food Chain Contamination	**	9.00E-05
17d. Population (lines 17a+17b+17c)	**	9.00E-05
18. Targets (lines 16+17d)	**	1.00E+00
19. HUMAN FOOD CHAIN THREAT SCORE	100	0.07

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
PEERLESS TUBE - 06/29/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	550
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc.	*	2.00E+03
22. Hazardous Waste Quantity	*	10
23. Waste Characteristics	1000	10
Targets		
24. Sensitive Environments		
24a. Level I Concentrations	**	0.00E+00
24b. Level II Concentrations	**	0.00E+00
24c. Potential Contamination	**	1.65E-01
24d. Sensitive Environments (lines 24a+24b+24c)	**	1.65E-01
25. Targets (line 24d)	**	1.65E-01
26. ENVIRONMENTAL THREAT SCORE	60	0.01
27. WATERSHED SCORE	100	0.18
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	0.18

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SOIL EXPOSURE PATHWAY SCORESHEET
PEERLESS TUBE - 06/29/95

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+02
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	6
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	1.00E+01
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	1.00E+01
11. RESIDENT POPULATION THREAT SCORE	**	3.30E+04

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

SOIL EXPOSURE PATHWAY SCORESHEET
PEERLESS TUBE - 06/29/95

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	1.00E+01
13. Area of Contamination	100	5.00E+00
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+02
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	6
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	2.10E+01
20. Targets (lines 18+19)	**	2.20E+01
21. NEARBY POPULATION THREAT SCORE	**	6.60E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	0.41

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

AIR PATHWAY SCORESHEET
PEERLESS TUBE - 06/29/95

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	196
2b. Particulate Potential to Release	500	0
2c. Potential to Release	500	196
3. Likelihood of Release	550	196
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	2.55E+02
8d. Population (lines 8a+8b+8c)	**	2.55E+02
9. Resources	5	5.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	7.40E-02
10c. Sens. Environments(lines 10a+10b)	***	7.40E-02
11. Targets (lines 7+8d+9+10c)	**	2.80E+02
AIR MIGRATION PATHWAY SCORE (Sa)	100	3.99E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: UNDERGRND STOR TANK

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	UNDERGRND STOR TANK	
b. Source Type	Non-Drum Container	
c. Secondary Source Type	N.A.	
d. Source Vol.(yd3/gal) | Source Area (ft2)	51.00	0.00
e. Source Volume/Area Value	2.04E+01	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00	
g. Data Complete?	NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00	
i. Data Complete?	NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	2.04E+01	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Trichloroethylene	> 2	YES	1.0E+06	ppm

Documentation for Source Type:

The underground storage tank"B" was used to store trichloroethylene. When the tank was decommissioned, release of trichloroethylene was observed in the borings drilled close to the tank. In addition, trichloroethylene was detected in the monitoring well MW-1 drilled within 10 feet. There is no documentation regarding the quantity of TCE stored in the tank or the leakage quantity, therefore, a one time volume of the tank was taken as the Source Volume.

Reference: Ref. 13 p 8, Ref 14 p 3 & 5 , Ref 9 p 4 , Ref. 17 p 14

WASTE QUANTITY
PEERLESS TUBE - 06/29/95

Documentation for Secondary Source Type:

Reference:

Documentation for Source Hazardous Substances:

The underground storage tank "B" was used for storage of virgin trichloroethylene (TCE), a degreaser used by the Peerless Tube factory . There is no documentation regarding the quantity of TCE which was stored in the tank. During the closure of the tank, monitoring wells were installed to determine if groundwater contamination was present. Groundwater sampling performed at a monitoring well (MW-1) installed within 10 feet of the UST detected 130 ppb of TCE. This concentration is more than three times the concentration of 28 ppb detected in the MW-2 monitoring well installed approximately 355 feet side-gradient to the tank.

Reference: Ref. 10 p 2,Ref.9 pp 10 & 22 thru 26, Ref 17 pp 14 & 16

Documentation for Source Volume:

There is no documentation regarding the quantity of TCE stored in the tank or the leakage quantity; therefore the source quantity was taken as equal to a one time volume of the tank.
Volume of the tank was equal to 10200 gallons or, 1 cu yd being equal to 200 gallons:

10200 /200 = 51 cu yd

Reference: Ref. 13 p 4, Ref 1 table 2-5

WASTE QUANTITY
PEERLESS TUBE - 06/29/95

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: SOIL

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	SOIL	
b. Source Type	Contaminated Soil	
c. Secondary Source Type	N.A.	
d. Source Vol.(yd3/gal) | Source Area (ft2)	0.00	2.00
e. Source Volume/Area Value	5.88E-05	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00	
g. Data Complete?	NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00	
i. Data Complete?	NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	5.88E-05	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Dichloroethylene, trans-1,2-	< 2	NO	4.7E+00	ppm
Tetrachloroethene	< 2	NO	3.7E+01	ppm
Trichloroethylene	< 2	NO	1.7E+01	ppm

Documentation for Source Type:

During the Site Investigation, analyses of soil samples S-2 (or SP-2) and S-4 (or SP-4) detected contaminant concentrations at more than three times the concentration in sample S-1 (or SP-1), which was selected as background.

Reference: Ref. 9 p10, Ref.17 pp 5,7,12 of 129

Documentation for Source Hazardous Substances:

On 11-2-1990 three soil samples (S-1, S-2, S-4)(SP-1, SP-2, SP-4 on the location map) were collected by NJDEP, DHWM, BPA on the north of the site during the S.I. Two samples (S-2 and S-4) were collected north of the existing buiding and one sample (S-1) west of the building. S-1 sample was selected as background.

Reference: Ref. 9 pp 8, 10, 12, 16 thru 20, Ref. 17 pp 5 of 129

Documentation for Source Area:

The source of contamination was limited to the locations of soil samples S-2 and S-4. Each sampled area was estimated to be 1 square foot in area.

Reference: Ref. 9 pp 10 & 12

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	UNDERGRND STOR TANK	GW-SW-A	2.04E+01	0.00E+00	2.04E+01
2	SOIL	GW-SW-SE-A	5.88E-05	0.00E+00	5.88E-05

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+02	10	6
SW: Overland Flow, DW	Tox./Persistence	4.00E+01	10	3
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	2.00E+03	10	10
SW: Overland Flow, Env	Etox./Persis./Bioacc.	2.00E+03	10	10
SW: GW to SW, DW	Tox./Persistence	4.00E+01	10	3
SW: GW to SW, HFC	Tox./Persis./Bioacc.	2.00E+03	10	10
SW: GW to SW, Env	Etox./Persis./Bioacc.	2.00E+03	10	10
Soil Exposure:Resident	Toxicity	1.00E+02	10	6
Soil Exposure: Nearby	Toxicity	1.00E+02	10	6
Air	Toxicity/Mobility	1.00E+02	10	6

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

GROUND WATER PATHWAY AQUIFER SUMMARY
PEERLESS TUBE - 06/29/95

No.	Aquifer ID	Type	Overlaying No.	Inter-Connected with	Likelihood of Release	Targets
1	GLACIAL DRIFT AQUIFE	Non K	0	0	550	2.09E+01
2	BRUNSWICK AQUIFER	Non K	1	1	550	3.70E+02

Containment

No.	Source ID	HWQ Value	Containment Value
1	UNDERGRND STOR TANK	2.04E+01	10
2	SOIL	5.88E-05	10
	Containment Factor		10

Documentation for Ground Water Containment, Source UNDERGRND STOR TANK:

Samples collected by ENSI indicated contaminants in the soil surrounding the UST "B" and in the water samples collected by NJDEP from the well MW-1 within 10 feet. No secondary containment is mentioned in the Tank Closure Report.

Reference: 14 pp 3 & 5 , 13, pp 4 & 16

Documentation for Ground Water Containment, Source SOIL:

There is no liner at the surface.

Reference: Ref.9 p 6

Net Precipitation

Net Precipitation (inches) 25

Documentation for Net Precipitation:

HRS Figure 3-2 was used to determine net precipitation factor value.

Reference: Ref. 1, Figure 3-2

GROUND WATER PATHWAY LIKELIHOOD OF RELEASE GLACIAL DRIFT AQUIFER AQUIFER
PEERLESS TUBE - 06/29/95

Aquifer: GLACIAL DRIFT AQUIFER

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

Documentation for GLACIAL DRIFT AQUIFER Aquifer:

Description of wells drilled on site identified two geological formations . Each one of the two formations constitutes an aquifer.

1-Silty Fine Sand and Fine Sand formation (Glacial Drift Aquifer). Covered with 0 to 5 feet of fill material it terminates at approximatly 16 feet below grade. It belongs to the Pleistocene glacial drift which covered the major part of the Essex County.

2 -Red Shale Bedrock (Brunswick Aquifer) . This formation consists of reddish-brown micaceous siltstone and shale. The Red Shale Bedrock corresponds to the Brunswick Formation beneath Essex County. It is the main source of potable groundwater in Essex County. It is intersected by various systems of joints and fractures so that water can move vertically as well as horizontally.

Reference: 16, pp4 & 5 of 13; 24, pp2 thru 16 of 30

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
1	MW1	Monitoring Well	0.000	Level I

Well No.	Hazardous Substance	Concent.	MCL	Cancer	RFD	Units
1	Trichloroethylene	1.3E+02	5.0E+00	3.2E+00	0.0E+00	ppb

Observed Release Factor 550

Documentation for Well MW1:

Well MW-1 is a monitoring well placed within 10 feet of the former trichloroethene underground storage tank, designated Tank "B" and considered as Source 1. Analytical results of one groundwater sample indicated 130 ppb of trichloroethylene.

Reference: 10,p 2 of 3; 9,pp 10 & 22 thru 26 of27; 17,pp14,16,85,129 of129

POTENTIAL TO RELEASE

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	6	

Depth to Aquifer

A. Depth of Hazardous Substances	15.00	feet

Documentation for Depth of Hazardous Substances:

Water samples were collected in three monitoring wells screened to 15 feet below grade. Trichloroethylene was detected in well MW-1 at 130 ppb.

Reference: Ref. 16,pp 2 thru. 4, Ref. 17, pp 14, 16 & 18, Ref 9, p 4

B. Depth to Aquifer from Surface	0.00	feet

Documentation for Depth to Aquifer from Surface :

The Glacial Drift Aquifer is the upper aquifer. There is no evidence of a continuous confining layer. It extends to bedrock or 16 feet below grade.

Reference: Ref. 16, pp 4 & 5

C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO

Documentation for Karst Layers:

No karst-like lithology is present. The aquifer is composed of silty fine sand and fine sand.

Reference: Ref. 24, pp 8 thru. 10

Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	1.0E-02	

Documentation for Hydraulic Conductivity:

Glacial drift is composed of sandy silt and fine sand. According to HRS Table 3-6 its conductivity was estimated 10E-2 cm/sec. No layers with lower hydraulic conductivity were documented within the 2-mile radius.

Reference: 1, Table 3-6; 24 pp 8 thru 10

Travel Time Factor	35

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Potential to Release Factor 460

Aquifer: BRUNSWICK AQUIFER

Type of Aquifer: Non Karst

Overlaying Aquifer: 1

Interconnected with: 1

Documentation for BRUNSWICK AQUIFER Aquifer:

The Brunswick Aquifer is a reddish shale formation with vertical and horizontal fractures allowing water movement vertically and horizontally. It is the main source of groundwater in Essex County. The depth of wells drilled in the formation varies from 100 to 500 feet. The depth of the aquifer beneath the site is reported to be 16 feet below grade. There is no documentation of an intermediate layer (with a hydraulic conductivity greater than 2 orders of magnitude difference) between the Glacial Drift and Brunswick aquifers. Therefore, the two aquifers are considered to be interconnected.

Reference: 16, pp 4 & 5 of 13; 24, pp 8 thru 11 of 30

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination

- N/A and/or data not specified

Observed Release Factor 0

POTENTIAL TO RELEASE

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	6	

Depth to Aquifer

A. Depth of Hazardous Substances	15.00	feet

Documentation for Depth of Hazardous Substances:

The monitoring well close to the UST "B" where trichloroethylene was detected at 130 ppb was screened at a depth of 15 feet below grade.

Reference: Ref. 16 p 2, Ref.17 p 14, Ref. 9 p 7, 16 & 24

B. Depth to Aquifer from Surface	16.00	feet

Documentation for Depth to Aquifer from Surface :

On site description of well log identified two formation each one constituting an aquifer with from the top to the bottom:

- Silty fine sand formation correspounding to the Glacial Drift. It terminates at 16 feet below grade.

- At 16 feet depth, reddish shale and siltstone correspounding to the Brunswick Formation.

Reference: Ref.16 pp 4 & 5

C. Depth to Aquifer (B - A)	1.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO

Documentation for Karst Layers:

No limestone or karst are present either in the Glacial Drift or the Brunswick Formation.

Reference: Ref 16, pp4 & 5

Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	1.0E-03	

Documentation for Hydraulic Conductivity:

There is no documentation of an intermediate layer (with a hydraulic conductivity greater than 2 orders of magnitude difference) between the Glacial Drift and the Brunswick Aquifer. The Brunswick Aquifer conductivity was estimated from the specific capacity average of the Essex County wells drilled in the Brunswick Formation.

Reference: 21, p 12 ; 25, p 1

Travel Time Factor	35

==========

Potential to Release Factor 460

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Trichloroethylene	10	1.00E-02	1.00E-01

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Dichloroethylene, trans-1,2-	100	1.00E+00	1.00E+02
Tetrachloroethene	100	1.00E-02	1.00E+00
Trichloroethylene	10	1.00E-02	1.00E-01

Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value

- N/A and/or data not specified

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+02
Toxicity/Mobility Value from Observed Release Hazardous Substances:	1.00E+01
Toxicity/Mobility Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	8.0	2.00E-01
> 1/2 to 1	24.0	5.00E-01
> 1 to 2	0.0	0.00E+00
> 2 to 3	20.0	2.00E-01
> 3 to 4	0.0	0.00E+00

Potential Contamination Factor: 0.900

Documentation for Target Population > 0 to 1/4 mile Distance Category:

There are no wells within 0.25 mile.

Reference: Ref. 8 pp 3,4 of 4

Documentation for Target Population > 1/4 to 1/2 mile Distance Category:

Dug wells are shallow wells and were estimated to be drilled in the glacial drift aquifer.

Reference: 8, pp 3,4 of 4

Documentation for Target Population > 1/2 to 1 mile Distance Category:

Dug wells were shallow wells and were estimated to be drilled in the glacial drift aquifer.

Reference: 8, pp 3 of 4

Documentation for Target Population > 1 to 2 miles Distance Category:

There are no shallow (dug) well within the ring.

Reference: 8, p 3 of 4

Documentation for Target Population > 2 to 3 miles Distance Category:

Dug wells are shallow wells and were estimated to be drilled in the glacial drift aquifer.

Reference: 8, p3 of 4

Documentation for Target Population > 3 to 4 miles Distance Category:

There are no shallow (dug) wells witin the ring

Reference: 8, p 3 of 4

Nearest Well

Level of Contamination: Potential
Distance in miles: 0.25

Nearest Well Factor: 2.00E+01

Documentation for Nearest Well:

From the CENTRACTS Report: the first dug wells were reported within ring .25 to .5 mile.

Reference: Ref.8 pp 3 & 4 of 4

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Documentation for Resources:

No resources identified. The shallow glacial drift is not used for industrial or irrigation purposes.

Reference: Ref. 24 pp 17 thru 27 of 30

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

Documentation for Wellhead Protection Area:

No designated wellhead protection in New Jersey

Reference: 35, p 1 of 1

Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

GROUND WATER PATHWAY TARGETS FOR AQUIFER BRUNSWICK AQUIFER
PEERLESS TUBE - 06/29/95

Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	0.0	0.00E+00
> 1/2 to 1	40.0	1.70E+00
> 1 to 2	8473.0	9.39E+01
> 2 to 3	11102.0	2.12E+02
> 3 to 4	3887.0	4.17E+01

Potential Contamination Factor: 350.000

Documentation for Target Population > 0 to 1/4 mile Distance Category:

There are no private or municipal drinking water wells within the 0.25 mile.

Reference: Ref. 26 pp 1,2 of 26, Ref. 8 p 4 of 4

Documentation for Target Population > 1/4 to 1/2 mile Distance Category:

There is no drinking water well within the ring.

Reference: Ref.26 pp 1,2 of 26 , Ref 8 p 3 of 4

Documentation for Target Population > 1/2 to 1 mile Distance Category:

Total population was taken equal to the population on private (drilled) well.
There are no public wells within the ring.

Reference: Ref.26 pp1,2 of 26, Ref 8 p 3 of 4

Documentation for Target Population > 1 to 2 miles Distance Category:

There are 8,393 people served by municipal drinking water wells and 80 people served by private wells (drilled).

Reference: Ref 26 pp1,2 of 26, Ref 8 p 3 of 4

Documentation for Target Population > 2 to 3 miles Distance Category:

10,967 people are served by municipal wells and 135 served by private wells (drilled).

Reference: Ref. 26 pp1,2 of 26, Ref.8 p 2 of 4

Documentation for Target Population > 3 to 4 miles Distance Category:

3,830 people are served by municipal well and 57 served by private well (drilled).

Reference: Ref 26 pp 1,2 of 26, Ref 8 p 3 of 4

Nearest Well

Level of Contamination: Potential
Distance in miles: 0.75

Nearest Well Factor: 9.00E+00

Documentation for Nearest Well:

From the CENTRACTS Report: the first reported drilled wells were within the ring 0.5 mile and 1 mile.

Reference: Ref. 8 p 3 of 4

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Documentation for Resources:

No resources identified.

Reference: Ref. 24 pp 17 thru 27

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

Documentation for Wellhead Protection Area:

No designated Wellhead Protection Area in New Jersey.

Reference: Ref. 35 p 1

SURFACE WATER PATHWAY SEGMENT SUMMARY
PEERLESS TUBE - 06/29/95

No.	Segment ID	Segment Type	Water Type	Start Point (mi)	End Point (mi)	Average Flow (cfs)
1	Wigwam Brook	River	Fresh	0.00	0.22	9
2	Second River	River	Fresh	0.22	5.78	18
3	Passaic River	River	Fresh	5.78	11.00	1148
4	Newark Bay	Coastal Ti	Brack	11.00	15.00	N.A.

Documentation for segment: Wigwam Brook:

The probable point of entry is into the Wigwam Brook approximately 100 feet from the source of contamination. Wigwam Brook flows for 0.22 mile, at whioch point it joins the Second River. The flow rate of Wigwam Brook is conservatively estimated at less than 10 cfs, as the actual flow is not monitored.

Reference: Ref. 29 p 1

Documentation for segment: Second River:

The Second River accepts the discharge from Wigwam Brook and continues to its confluence with the Passaic River. A gaging station approximately 4 miles downstream of the Wigwam Brook discharge documents an estimated 18 cfs flow rate.

Reference: Ref. 29 p 1, Ref. 32 p 1

Documentation for segment: Passaic River:

The Passaic River accepts the Second River discharge and continues the surface water pathway for approximately six miles downstream before discharging to the upper portion of the Newark Bay. The flow rate is measured at Little Falls, which is upstream of the Dundee Dam. The Passaic River is tidally influenced from the dam downstream to the bay.

Reference: Ref. 29 p 1, Ref. 33 p 2

Documentation for segment: Newark Bay:

The Newark Bay is the final segment of the 15-mile surface water pathway. The bay is a tidally-influenced, coastal, tidal water body.

Reference: Ref. 29 p 1

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
PEERLESS TUBE - 06/29/95

OBSERVED RELEASE

No.	Sample ID	Sample Type	Distance (miles)	Level of Contamination DW	HFC	Env

- N/A and/or data not specified

Observed Release Factor 0

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
PEERLESS TUBE - 06/29/95

POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

No.	Source ID	HWQ Value	Containment Value
1	UNDERGRND STOR TANK	2.04E+01	10
2	SOIL	5.88E-05	10

Containment Factor: 10

Documentation for Overland Flow Containment, Source UNDERGRND STOR TANK:

No maintained engineered cover, or run-on/runoff control system was documented for the underground storage tank used to store the solvent.

Reference: Ref. 13, p 4

Documentation for Overland Flow Containment, Source SOIL:

No documentation is available of hazardous substance migration from the source, but no cover and no run-on/run-off management system has been documented as being present.

Reference: Ref. 1 table 4-2, Ref. 9 p 6

Distance to Surface Water

Distance to Surface Water: 100.0 feet

Distance to Surface Water Factor: 20

Documentation for Distance to Surface Water:

The contaminated soil source is estimated, by direct measurement on the provided tax map of the site, as being located approximately 100 feet from the Wigwam Brook.

Reference: Ref. 7 p 1 of 1

Runoff

A. Drainage Area: 4.0 acres

Documentation for Drainage Area:

The Site is in a flat area surrounded by streets and a park . Drainage area is limited to the site area of approximately 4 acres a ccording to the Local Tax Map:
Northern Section: 270 ft x 282 ft = 75600 square feet
Southern Section: (260 ft+140 ft)x 257 ft = 102800 square feet
Total : 75600 + 102800 = 178400 square feet or
178400/43560 = 4 acres

Reference: Ref.7 p 1 of 1

B. 2-year, 24-hour Rainfall: 3.5 inches

Documentation for Rainfall:

Meteorological Data from US Department of Commerce, Weather Bureau, Atlas of United States.

Reference: Ref. 4 p 2 of 2

C. Soil Group: B
Medium-textured soils with moderate infiltration rates

Documentation for Soil Group:

Soil is mainly a fine sand or silty fine sand equivalent to a medium texture soils.

Reference: 16, p 4 of13; 1 Table 4-4

Runoff Factor: 1

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Potential to Release by Overland Flow Factor: 210

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
PEERLESS TUBE - 06/29/95

Potential to Release by Flood

No.	Source ID	HWQ Value	Flood Containment Value	Flood Frequency Value	Potential to Release by Flood
1	UNDERGRND STOR TANK	2.04E+01	10	25	250
2	SOIL	5.88E-05	10	25	250

==========

Potential to Release by Flood Factor: 250

Documentation for Flood Containment, Source UNDERGRND STOR TANK:

UST "B" is on the north side of Locust Avenue, and lacks flood containment.

Reference: Ref.16, p 7

Documentation for Flood Frequency, Source UNDERGRND STOR TANK:

The area is in a 100-year flood plain.

Reference: Ref. 27, p 2

Documentation for Flood Containment, Source SOIL:

There is no flood containement around the soil.

Reference: Ref.9, p 6

Documentation for Flood Frequency, Source SOIL:

The site is in a 100-year flood plain.

Reference: Ref. 27 p 2

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Trichloroethylene	10	4.00E-01	4.00E+00

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Dichloroethylene, trans-1,2-	100	4.00E-01	4.00E+01
Tetrachloroethene	100	4.00E-01	4.00E+01
Trichloroethylene	10	4.00E-01	4.00E+00

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value

- N/A and/or data not specified

Toxicity/Persistence Value from Source Hazardous Substances:	4.00E+01
Toxicity/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence Factor:	4.00E+01
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	3

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
PEERLESS TUBE - 06/29/95

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
- N/A and/or data not specified		

Type of Surface Water Body	Total Population	Dilution-Weighted Population
- N/A and/or data not specified		

Dilution-Weighted Population Served
by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Documentation for Resources:

Within the 15-mile surface pathway, the only mentioned recreational use is occasional fishing.

Reference: Ref. 31 p 1 of 1

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Trichloroethylene	10	4.00E-01	5.00E+01	2.00E+02

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Dichloroethylene, trans-1,2-	100	4.00E-01	5.00E+01	2.00E+03
Tetrachloroethene	100	4.00E-01	5.00E+01	2.00E+03
Trichloroethylene	10	4.00E-01	5.00E+01	2.00E+02

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	2.00E+03
Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence/Bioaccumulation Factor:	2.00E+03
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	10

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT HUMAN FOOD CHAIN THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Fishery	Annnual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di
2 Second River	1.0	River	18	0.0	1.00E-01	3.00E-03

Sum of (Pi*Di): 3.00E-03

Potential Human Food Chain Contamination Factor: 3.00E-04

Documentation for Second River Fishery:

No data concerning fishery production is available for the area. Public health advisories recommend not eating any fish or shellfish caught within the 15-mile surface water pathway. It is undocumented, but likely, that some fishermen do consume their catch. An assumption was made that at least 1 pound of fish was consumed per year.

Reference: Ref. 31 p 1 of 1

Food Chain Individual

Location of Nearest Fishery: Second River
Distance from the Probable Point of Entry: 0.22 miles
Type of Surface Water Body: River
Dilution Weight: 0.1000000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Documentation for Second River:

The Second River accepts the discharge from Wigwam Brook and continues to its confluence with the Passaic River. A gaging station approximately 4 miles downstream of the Wigwam Brook discharge documents an estimated 18 cfs flow rate.

Reference: Ref. 29 p 1, Ref. 32 p 1

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Trichloroethylene	100	4.00E-01	5.00E+01	2.00E+03

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Dichloroethylene, trans-1,2-	1	4.00E-01	5.00E+01	2.00E+01
Tetrachloroethene	100	4.00E-01	5.00E+01	2.00E+03
Trichloroethylene	100	4.00E-01	5.00E+01	2.00E+03

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Ecotoxicity/Persistence/Bioaccummulation Value from Source Hazardous Substances:	2.00E+03
Ecotoxicity/Persistence/Bioaccummulation Value from Observed Release Hazardous Substances:	0.00E+00
Ecotoxicity/Persistence/Bioaccummulation Factor:	2.00E+03
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	10

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value
River	3 Second River	5
River	4 Passaic River	5
Coastal Tidal Area	5 Newark Bay	5

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value
Coastal Tidal Area	1 Wetlands	0.42	25

Documentation for Sensitive Environment Wetlands:

The wetland was measured from the National Wetland Inventory Map.

Reference: Ref.29 p 1

Documentation for Sensitive Environment Second River:

Second River is considered a sensitive environment. This river is classified as FW2-NT. FW2-NT waters are non-trout waters to be suitable for the maintenance, migration and propagation of the natural and established biota; primary and secondary contact recreation; industrial and agricultural water supply; public potable water supply after such treatment as required by law or regulation;

or any other reasonable uses.

Reference: Ref. 36 p 3,5,6,8

Documentation for Sensitive Environment Passaic River:

The Passaic River is considered a sensitive environment. The segment of this river that lies within the 15-mile pathway is classified as SE3, to be suitable for secondary contact recreation, maintenance and migration of fish populations, migration of diadromous fish, maintenance of wildlife, or any other reasonable uses.

Reference: Ref. 36 p 4,8

Documentation for Sensitive Environment Newark Bay:

Newark Bay is considered a sensitive environment. The bay is classified as SE3. SE3 waters are defined as suitable for secondary contact recreation; maintenance and migration of fish populations; migration of diadramous fish; maintenance of wildlife; or any other reasonable uses.

Reference: Ref. 36 p 4,7

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
PEERLESS TUBE - 06/29/95

Type of Surface Water Body	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Small to Moderate Stream	5	0	1.00E-01	5.00E-01
Large Stream to River	5	0	1.00E-03	5.00E-03
Coastal Tidal Waters	5	25	1.00E-04	3.00E-03

Sum of Dj(Wj+Sj): 5.08E-01
Sum of Dj(Wj+Sj)/10: 5.08E-02

==========

Potential Contamination Sensitive Environment Factor: 5.51E-01

SURFACE WATER PATHWAY GW TO SW CONTAINMENT SUMMARY
PEERLESS TUBE - 06/29/95

Containment

No.	Source ID	HWQ Value	Containment Value
1	UNDERGRND STOR TANK	2.04E+01	10
2	SOIL	5.88E-05	10
	Containment Factor		10

Documentation for Ground Water Containment, Source UNDERGRND STOR TANK:

Samples collected by ENSI indicated contaminants in the soil surrounding the UST "B" and in the water samples collected by NJDEP from the well MW-1 within 10 feet. No secondary containment is mentioned in the Tank Closure Report.

Reference: 14 pp 3 & 5 , 13, pp 4 & 16

Documentation for Ground Water Containment, Source SOIL:

There is no liner at the surface.

Reference: Ref.9 p 6

Net Precipitation

Net Precipitation (inches)	0.00

Documentation for Net Precipitation:

HRS Figure 3-2 was used to determine net precipitation factor value.

Reference: Ref. 1, Figure 3-2

SURFACE WATER PATHWAY GW TO SW COMPONENT LIKELIHOOD OF RELEASE
PEERLESS TUBE - 06/29/95

Aquifer: GLACIAL DRIFT AQUIFER

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

Documentation for GLACIAL DRIFT AQUIFER Aquifer:

Description of wells drilled on site identified two geological formations . Each one of the two formations constitutes an aquifer.

1-Silty Fine Sand and Fine Sand formation (Glacial Drift Aquifer). Covered with 0 to 5 feet of fill material it terminates at approximatly 16 feet below grade. It belongs to the Pleistocene glacial drift which covered the major part of the Essex County.

2 -Red Shale Bedrock (Brunswick Aquifer) . This formation consists of reddish-brown micaceous siltstone and shale. The Red Shale Bedrock corresponds to the Brunswick Formation beneath Essex County. It is the main source of potable groundwater in Essex County. It is intersected by various systems of joints and fractures so that water can move vertically as well as horizontally.

Reference: 16, pp4 & 5 of 13; 24, pp2 thru 16 of 30

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
1	MW1	Monitoring Well	0.000	Level I

Well No.	Hazardous Substance	Concent.	MCL	Cancer	RFD	Units
1	Trichloroethylene	1.3E+02	5.0E+00	3.2E+00	0.0E+00	ppb

==========

Observed Release Factor 550

Documentation for Well MW1:

Well MW-1 is a monitoring well placed within 10 feet of the former trichloroethene underground storage tank, designated Tank "B" and considered as Source 1. Analytical results of one groundwater sample indicated 130 ppb of trichloroethylene.

Reference: 10,p 2 of 3; 9,pp 10 & 22 thru 26 of27; 17,pp14,16,85,129 of129

POTENTIAL TO RELEASE

Ground Water to Surface Water Angle

Probable Point of Entry	0.00	miles
Angle Theta	120	

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	6	

Depth to Aquifer

A. Depth of Hazardous Substances	15.00	feet

Documentation for Depth of Hazardous Substances:

Water samples were collected in three monitoring wells screened to 15 feet below grade. Trichloroethylene was detected in well MW-1 at 130 ppb.

Reference: Ref. 16,pp 2 thru. 4, Ref. 17, pp 14, 16 & 18, Ref 9, p 4

B. Depth to Aquifer from Surface	0.00	feet

Documentation for Depth to Aquifer from Surface :

The Glacial Drift Aquifer is the upper aquifer. There is no evidence of a continuous confining layer. It extends to bedrock or 16 feet below grade.

Reference: Ref. 16, pp 4 & 5

C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO

Documentation for Karst Layers:

No karst-like lithology is present. The aquifer is composed of silty fine sand and fine sand.

Reference: Ref. 24, pp 8 thru. 10

Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	0.0E-00	
Travel Time Factor	35	

Potential to Release Factor	460

NO
TO

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Factor Value	Persist. Value	Mobility Value	Toxicity/ Mobililty/ Persistence
Trichloroethylene	10	4.00E-01	1.00E-02	4.00E-02

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Factor Value	Persist. Value	Mobility Value	Toxicity/ Mobililty/ Persistence
Dichloroethylene, trans-1,2-	100	4.00E-01	1.00E+00	4.00E+01
Tetrachloroethene	100	4.00E-01	1.00E-02	4.00E-01
Trichloroethylene	10	4.00E-01	1.00E-02	4.00E-02

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Toxicity Factor Value	Persist. Value	Toxicity/ Persistence
Trichloroethylene	10	4.00E-01	4.00E+00

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Toxicity/Mobility/Persistence Value from Source Hazardous Substances:	4.00E+01
Toxicity/Mobility/Persistence Value from Observed Release Hazardous Substances:	4.00E+00
Toxicity/Mobility/Persistence Factor:	4.00E+01
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	3

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
- N/A and/or data not specified		

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
- N/A and/or data not specified		

Type of Surface Water Body	Total Population	Dilution-Weighted Population
- N/A and/or data not specified		

Dilution-Weighted Population Served by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Documentation for Resources:

Within the 15-mile surface pathway, the only mentioned recreational use is occasional fishing.

Reference: Ref. 31 p 1 of 1

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Value	Persist. Value	Mobility Value	Bio-accum. Value	Tox./Mobil./ Persistence/ Bioaccum. Value
Trichloroethylene	10	4.00E-01	1.00E-02	5.00E+01	2.00E+00

SW PATHWAY: GW TO SW COMPONENT HUMAM FOOD CHAIN THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persist. Value	Mobility Value	Bio-accum. Value	Tox./Mobil./ Persistence/ Bioaccum. Value
Dichloroethylene, trans-1,2-	100	4.00E-01	1.00E+00	5.00E+01	2.00E+03
Tetrachloroethene	100	4.00E-01	1.00E-02	5.00E+01	2.00E+01
Trichloroethylene	10	4.00E-01	1.00E-02	5.00E+01	2.00E+00

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Toxicity Value	Persist. Value	Bio-accum. Value	Toxicity/ Persistence Bioaccum. Value
Trichloroethylene	10	4.00E-01	5.00E+01	2.00E+02

Toxicity/Mobility/Persistence/Bioaccumulation Value from Source Hazardous Substances:	2.00E+03
Toxicity/Mobility/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	2.00E+02
Toxicity/Mobility/Persistence/Bioaccumulation Factor:	2.00E+03
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	10

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Fishery	Annnual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di
2 Second River	1.0	River	18	0.0	3.00E-02	9.00E-04

Sum of (Pi*Di): 9.00E-04

Potential Human Food Chain Contamination Factor: 9.00E-05

Documentation for Second River Fishery:

No data concerning fishery production is available for the area. Public health advisories recommend not eating any fish or shellfish caught within the 15-mile surface water pathway. It is undocumented, but likely, that some fishermen do consume their catch. An assumption was made that at least 1 pound of fish was consumed per year.

Reference: Ref. 31 p 1 of 1

Food Chain Individual

Location of Nearest Fishery: Second River
Distance from the Probable Point of Entry: 0.22 miles
Type of Surface Water Body: River
Dilution Weight: 0.0300000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Documentation for Second River:

The Second River accepts the discharge from Wigwam Brook and continues to its confluence with the Passaic River. A gaging station approximately 4 miles downstream of the Wigwam Brook discharge documents an estimated 18 cfs flow rate.

Reference: Ref. 29 p 1, Ref. 32 p 1

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Eco-toxicity Value	Persist. Value	Mob. Value	Bio-accum. Value	Ecotoxicity/ Mobility/ Persistence/ Bioaccum. Value
Trichloroethylene	100	4.00E-01	1.00E-02	5.00E+01	2.00E+01

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Eco-toxicity Value	Persist. Value	Mob. Value	Bio-accum. Value	Ecotoxicity/ Mobility/ Persistence/ Bioaccum. Value
Dichloroethylene, trans-1,2-	1	4.00E-01	1.00E+00	5.00E+01	2.00E+01
Tetrachloroethene	100	4.00E-01	1.00E-02	5.00E+01	2.00E+01
Trichloroethylene	100	4.00E-01	1.00E-02	5.00E+01	2.00E+01

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Eco-toxicity Value	Persist. Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Trichloroethylene	100	4.00E-01	5.00E+01	2.00E+03

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Source Substances:	2.00E+01
Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Observed Hazardous Substances:	2.00E+03
Ecotoxicity/Mobility/Persistence/Bioaccummulation Factor:	2.00E+03
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	10

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		
Sum of Sensitive Environments Values:		0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT TARGETS
PEERLESS TUBE - 06/29/95

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value
River	3 Second River	5
River	4 Passaic River	5
Coastal Tidal Area	5 Newark Bay	5

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value
Coastal Tidal Area	1 Wetlands	0.42	25

Documentation for Sensitive Environment Wetlands:

The wetland was measured from the National Wetland Inventory Map.

Reference: Ref.29 p 1

Documentation for Sensitive Environment Second River:

Second River is considered a sensitive environment. This river is classified as FW2-NT. FW2-NT waters are non-trout waters to be suitable for the maintenance, migration and propagation of the natural and established biota; primary and secondary contact recreation; industrial and agricultural water supply; public potable water supply after such treatment as required by law or regulation;

or any other reasonable uses.

Reference: Ref. 36 p 3,5,6,8

Documentation for Sensitive Environment Passaic River:

The Passaic River is considered a sensitive environment. The segment of this river that lies within the 15-mile pathway is classified as SE3, to be suitable for secondary contact recreation, maintenance and migration of fish populations, migration of diadromous fish, maintenance of wildlife, or any other reasonable uses.

Reference: Ref. 36 p 4,8

Documentation for Sensitive Environment Newark Bay:

Newark Bay is considered a sensitive environment. The bay is classified as SE3. SE3 waters are defined as suitable for secondary contact recreation; maintenance and migration of fish populations; migration of diadramous fish; maintenance of wildlife; or any other reasonable uses.

Reference: Ref. 36 p 4,7

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT TARGETS
PEERLESS TUBE - 06/29/95

Type of Surface Water Body	Sum of Sens. Environment Values (Sj)	Sum of Wetland Frontage Values (Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Small to Moderate Stream	5	0	3.00E-02	1.50E-01
Large Stream to River	5	0	3.00E-04	1.50E-03
Coastal Tidal Waters	5	25	3.00E-05	9.00E-04

Sum of Dj(Wj+Sj): 1.52E-01
Sum of Dj(Wj+Sj)/10: 1.52E-02

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Potential Contamination Sensitive Environment Factor: 1.65E-01

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE
PEERLESS TUBE - 06/29/95

Likelihood of Exposure

No.	Source ID	Level of Contamination
2	SOIL	Level I

Likelihood of Exposure Factor: 550

Documentation for Area of Contamination, Source UNDERGRND STOR TANK:

Observed contamination was either in the groundwater (- 4.66 feet) or in the soil (- 5 feet), and in either case was deeper than 2 feet below grade.

Reference: Ref. 16 p 10, ref.13 p 8

Documentation for Area of Contamination, Source SOIL:

The contamination of the area located north of the northern building was restricted to the vicinity of sample SP-2 (S-2) and sample SP-4 (S-4), and was estimated at 1 square foot per sample location.

Reference: Ref.9 pp 10 & 12

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
2	Dichloroethylene, trans-1,2-	< 2	4.7E+00	0.0E+00	1.2E+04	ppm
2	Tetrachloroethene	< 2	3.7E+01	1.1E+01	5.8E+03	ppm
2	Trichloroethylene	< 2	1.7E+01	5.3E+01	0.0E+00	ppm

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE
PEERLESS TUBE - 06/29/95

Documentation for Source UNDERGRND STOR TANK, Contaminants:

The underground storage tank "B" was used for storage of virgin trichloroethylene (TCE), a degreaser used by the Peerless Tube factory . There is no documentation regarding the quantity of TCE which was stored in the tank. During the closure of the tank, monitoring wells were installed to determine if groundwater contamination was present. Groundwater sampling performed at a monitoring well (MW-1) installed within 10 feet of the UST detected 130 ppb of TCE. This concentration is more than three times the concentration of 28 ppb detected in the MW-2 monitoring well installed approximately 355 feet side-gradient to the tank.

Reference: Ref. 10 p 2,Ref.9 pp 10 & 22 thru 26, Ref 17 pp 14 & 16

Documentation for Source SOIL, Contaminants:

On 11-2-1990 three soil samples (S-1, S-2, S-4)(SP-1, SP-2, SP-4 on the location map) were collected by NJDEP, DHWM, BPA on the north of the site during the S.I. Two samples (S-2 and S-4) were collected north of the existing buiding and one sample (S-1) west of the building. S-1 sample was selected as background.

Reference: Ref. 9 pp 8, 10, 12, 16 thru 20, Ref. 17 pp 5 of 129

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Dichloroethylene, trans-1,2-	100
Tetrachloroethene	100
Trichloroethylene	10

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Toxicity Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	5.88E-05
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT TARGETS
PEERLESS TUBE - 06/29/95

Targets

Level I Population:	0.0	Value:	0.00
Level II Population:	0.0	Value:	0.00
Workers:	300.0	Value:	10.00

Documentation for Workers:

The northern building is adjacent to the Source SP-2- SP-4 . The number of workers is 300.

Reference: 9, pp10 & 12 of27; 3, p 1 of 1

Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Documentation for Resources:

No resources identified

Reference:

Terrestial Sensitive Environment	Value
- N/A and/or data not specified	

Terrestrial Sensitive Environments Factor: 0.00

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT LIKELIHOOD OF EXPOSURE
PEERLESS TUBE - 06/29/95

Likelihood of Exposure

No.	Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
2	SOIL	Level I	10	10

Highest Attractiveness/Accessibility Value: 10
Sum of Eligible Areas Of Contamination (sq. feet): 10
Area of Contamination Value: 5

Likelihood of Exposure Factor Category: 5

Documentation for Attractiveness/Accessibility, Source UNDERGRND STOR TANK:

Contamination was observed in soil samples collected 5 feet below grade. There is no indication of surface contamination at a depth less than 2 feet below grade.

Reference: Ref. 13 p 8

Documentation for Attractiveness/Accessibility, Source SOIL:

The fence which separates the source from the Watsessing Park was reported damaged opening an access from the Park.

Reference: Ref 9 p 4, Ref. 20 p 7

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
2	Dichloroethylene, trans-1,2-	< 2	4.7E+00	0.0E+00	1.2E+04	ppm
2	Tetrachloroethene	< 2	3.7E+01	1.1E+01	5.8E+03	ppm
2	Trichloroethylene	< 2	1.7E+01	5.3E+01	0.0E+00	ppm

Documentation for Source UNDERGRND STOR TANK, Contaminants:

The underground storage tank "B" was used for storage of virgin trichloroethylene (TCE), a degreaser used by the Peerless Tube factory . There is no documentation regarding the quantity of TCE which was stored in the tank. During the closure of the tank, monitoring wells were installed to determine if groundwater contamination was present. Groundwater sampling performed at a monitoring well (MW-1) installed within 10 feet of the UST detected 130 ppb of TCE. This concentration is more than three times the concentration of 28 ppb detected in the MW-2 monitoring well installed approximately 355 feet side-gradient to the tank.

Reference: Ref. 10 p 2,Ref.9 pp 10 & 22 thru 26, Ref 17 pp 14 & 16

Documentation for Source SOIL, Contaminants:

On 11-2-1990 three soil samples (S-1, S-2, S-4)(SP-1, SP-2, SP-4 on the location map) were collected by NJDEP, DHWM, BPA on the north of the site during the S.I. Two samples (S-2 and S-4) were collected north of the existing buiding and one sample (S-1) west of the building. S-1 sample was selected as background.

Reference: Ref. 9 pp 8, 10, 12, 16 thru 20, Ref. 17 pp 5 of 129

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Dichloroethylene, trans-1,2-	100
Tetrachloroethene	100
Trichloroethylene	10

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
PEERLESS TUBE - 06/29/95

Toxicity Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	5.88E-05
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT TARGETS
PEERLESS TUBE - 06/29/95

Nearby Individual

Population within 1/4 mile: 1710.0

Nearby Individual Value: 1.0

Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	1710.0	4.1
> 1/4 to 1/2 mile	6687.0	6.5
> 1/2 to 1 mile	25258.0	10.2

Population Within 1 Mile Factor: 21.0

Documentation for Population > 0 to 1/4 mile Distance Category:

Resident Population was identified by using the 1990 Block Group population and house count data found in the Census Bureau's 1990 Tiger/Line File.

Reference: Ref. 8 pp 3 & 4 of 4

Documentation for Population > 1/4 to 1/2 mile Distance Category:

Resident population was identified by using the 1990 Block Group population and house count data found in the Census Bureau's 1990 Tiger/Line File.

Reference: Ref.8 pp3 & 4 of 4

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT TARGETS
PEERLESS TUBE - 06/29/95

Documentation for Population > 1/2 to 1 mile Distance Category:

Resident population was identified by using the 1990 Block Group population and house count data found in the Census Bureau's 1990 Tiger/Line File.

Reference: Ref.8 pp 3 & 4

AIR PATHWAY LIKELIHOOD OF RELEASE

PEERLESS TUBE - 06/29/95

OBSERVED RELEASE

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

Observed Release Factor: 0

Gas Migration Potential

GAS POTENTIAL TO RELEASE

Source ID	Source Type	Gas Contain. Value (A)	Gas Source Type Value (B)	Gas Migrtn. Potent. Value (C)	Sum (B+C)	Gas Potential to Rel. Value A(B+C)
UNDERGRND STOR TANK	Non-Drum Container	7	11	17	28	196
SOIL	Contaminated Soil	10	0	17	17	170

Gas Potential to Release Factor: 196

Documentation for Gas Containment, Source UNDERGRND STOR TANK:

There is no indication of surface contamination. The contaminated soil samples were collected at a depth of 5 feet.

Reference: Ref. 13, p 8, Ref 9 p11, Ref. 1, Table 6-3

Documentation for Source Type, Source UNDERGRND STOR TANK:

The underground storage tank"B" was used to store trichloroethylene. When the tank was decommissioned, release of trichloroethylene was observed in the borings drilled close to the tank. In addition, trichloroethylene was detected in the monitoring well MW-1 drilled within 10 feet. There is no documentation regarding the quantity of TCE stored in the tank or the leakage quantity, therefore, a one time volume of the tank was taken as the Source Volume.

Reference: Ref. 13 p 8, Ref 14 p 3 & 5 , Ref 9 p 4 , Ref. 17 p 14

Documentation for Secondary Source Type, UNDERGRND STOR TANK:

Reference:

Documentation for Gas Containment, Source SOIL:

Contaminated soil samples was collected at a depth less than 2 feet and the soil is no cover by heavy vegetation.

Reference: Ref 1 Table 6-3, Ref. 20 p 7, Ref9 p 6

Documentation for Source Type, Source SOIL:

During the Site Investigation, analyses of soil samples S-2 (or SP-2) and S-4 (or SP-4) detected contaminant concentrations at more than three times the concentration in sample S-1 (or SP-1), which was selected as background.

Reference: Ref. 9 p10, Ref.17 pp 5,7,12 of 129

Source: UNDERGRND STOR TANK

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value
Trichloroethylene	17

Average of Gas Migration Potential Value for 3 Hazardous Substances: 17.000

Gas Migration Potential Value From Table 6-7: 17

Source: SOIL

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value
Dichloroethylene, trans-1,2-	17
Tetrachloroethene	17
Trichloroethylene	17

Average of Gas Migration Potential Value for 3 Hazardous Substances: 17.000

Gas Migration Potential Value From Table 6-7: 17

Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

Source ID	Source Type	Partic. Contain. Value (A)	Partic. Source Type Value (B)	Partic. Migrtn. Potent. Value (C)	Sum (B+C)	Partic. Potential to Rel. Value A(B+C)
- N/A and/or data not specified						

Particulate Potential to Release Factor: 0

Documentation for Particulate Containment, Source UNDERGRND STOR TANK:

There is no indication of surface contamination. The contaminated samples were collected at a depth of 5 feet. The source location close to MW-1 is substantially devoid of soil vegetation.

Reference: Ref.9 p 11, Ref. 13, p.8, Ref 1 Table 6-9

Documentation for Source Type, Source UNDERGRND STOR TANK:

The underground storage tank"B" was used to store trichloroethylene. When the tank was decommissioned, release of trichloroethylene was observed in the borings drilled close to the tank. In addition, trichloroethylene was detected in the monitoring well MW-1 drilled within 10 feet. There is no documentation regarding the quantity of TCE stored in the tank or the leakage quantity, therefore, a one time volume of the tank was taken as the Source Volume.

Reference: Ref. 13 p 8, Ref 14 p 3 & 5 , Ref 9 p 4 , Ref. 17 p 14

Documentation for Secondary Source Type, UNDERGRND STOR TANK:

Reference:

Documentation for Particulate Containment, Source SOIL:

Contaminated soil samples were collected from a depth of 0.5 to 2 feet. The soil is not covered by heavy vegetation.

Reference: Ref.1 Table 6-9, Ref 9 pp 5 & 9 thru 12, Ref 20 p 6 & 7

Documentation for Source Type, Source SOIL:

During the Site Investigation, analyses of soil samples S-2 (or SP-2) and S-4 (or SP-4) detected contaminant concentrations at more than three times the concentration in sample S-1 (or SP-1), which was selected as background.

Reference: Ref. 9 p10, Ref.17 pp 5,7,12 of 129

Documentation for Particulate Migration Potential:

HRS Figure 6-2 was used to define Particulate Migration Potential Value.

Reference: Ref. 1 Figure 6-2

Source: UNDERGRND STOR TANK

Particulate Hazardous Substance

Source: SOIL

Particulate Hazardous Substance

AIR PATHWAY WASTE CHARACTERISTICS

PEERLESS TUBE - 06/29/95

Source: 1 UNDERGRND STOR TANK

Source Hazardous Waste Quantity Value: 20.40

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Trichloroethylene	10	1.00E+00	NA	1.00E+01

AIR PATHWAY WASTE CHARACTERISTICS

PEERLESS TUBE - 06/29/95

Source: 2 SOIL

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Dichloroethylene, trans-1,2-	100	1.00E+00	NA	1.00E+02
Tetrachloroethene	100	1.00E+00	NA	1.00E+02
Trichloroethylene	10	1.00E+00	NA	1.00E+01

Hazardous Substances Found in an Observed Release

Sample ID	Observed Release Hazardous Substance	Particulate Toxicity/ Mobility Value	Gas Toxicity/ Mobility Value

- N/A and/or data not specified

Documentation for Particulate Mobility:

HRS Figure 6-3 was used to define Particulate Mobility Factor Values

Reference: Ref. 1 figure 6-3

AIR PATHWAY WASTE CHARACTERISTICS

PEERLESS TUBE - 06/29/95

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+02
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	2.04E+01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

Actual Contamination

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

Potential Contamination

Distance Categories Subject to Potential Contamination	Population	Value
Onsite	300.0	16.4000
> 0 to 1/4 mile	1710.0	40.8000
> 1/4 to 1/2 mile	6687.0	28.2000
> 1/2 to 1 mile	25258.0	26.1000
> 1 to 2 miles	129319.0	83.3000
> 2 to 3 miles	175404.0	37.5000
> 3 to 4 miles	203105.0	22.9000
	Potential Contaminantion Factor:	255.0000

Documentation for Population Onsite Distance Category:

300 workers are regularly present on site.

Reference: Ref. 3 p.1

Documentation for Population > 0 to 1/4 mile Distance Category:

Information from the Centracts report.

Reference: Ref. 8 pp 3,4

Documentation for Population > 1/4 to 1/2 mile Distance Category:

Information from the Centracts Report.

Reference: Ref.8, pp 3,4

Documentation for Population > 1/2 to 1 mile Distance Category:

Information from the Centract Report

Reference: Ref. 8 pp 3,4

Documentation for Population > 1 to 2 miles Distance Category:

Information from the Centracts Report

Reference: Ref, 8 pp 3,4

Documentation for Population > 2 to 3 miles Distance Category:

information from the Centracts report

Reference: Ref 8 pp 3,4

Documentation for Population > 3 to 4 miles Distance Category:

Information from the Centract report

Reference: Ref. 8 pp 3,4

Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

The nearest residence is at 651 feet from Source 2 i.e

651 ft/ 5280 = 0.123 mile

Reference: Ref. 7 p 1 of 1

Resources

Resource Use: YES

Resource Value: 5

Documentation for Resources:

Watsessing Recreation Park is adjacent to the north boundary of the site close to S-1(SP- 1) and S-4 (SP-4) defined as sources.

Reference: Ref.9 p 10 of 27

Actual Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Actual Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value
- N/A and/or data not specified		

Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value	Distance Weight	Weighted Value/10
CRITICAL HABITAT	2.000	75	0.0051	0.038
CRITICAL HABITAT	2.800	75	0.0023	0.017
Sum of Sensitive Environments Weighted Values/10:				0.056

Potential Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value	Distance Weight	Weighted Value/10
> 2 to 3 miles	6.0	25.0	0.0023	0.006
> 1 to 2 miles	2.0	25.0	0.0051	0.013
Total Wetland Acreage:	8.0			
		Sum of Wetland Weighted Acreage Values/10:		0.019

Sensitive Environment Potential Contamination Factor: 0.074

Documentation for Sensitive Environment WETLANDS:

Wetlands Areas were identified and their surface area calculated using the Wetlands National Inventory Map.

Reference: Ref. 29, p1, Ref 23, p1

Documentation for Sensitive Environment WETLANDS:

Wetlands areas were identified and their surface area calculated using the Wetlands Inventory Map.

Reference: 23, p1 of 1; 29, p 1 of 1

Documentation for Sensitive Environment CRITICAL HABITAT:

According to the Natural Heritage Index Map published by NJDEP two documented locations for rare and endangered elements of natural diversity are identified within the 4-mile radius.

Reference: Ref 34, p 6,15